General Disclaimer

One or more of the Following Statements may affect this Document

- This document has been reproduced from the best copy furnished by the organizational source. It is being released in the interest of making available as much information as possible.

- This document may contain data, which exceeds the sheet parameters. It was furnished in this condition by the organizational source and is the best copy available.

- This document may contain tone-on-tone or color graphs, charts and/or pictures, which have been reproduced in black and white.

- This document is paginated as submitted by the original source.

- Portions of this document are not fully legible due to the historical nature of some of the material. However, it is the best reproduction available from the original submission.

Produced by the NASA Center for Aerospace Information (CASI)

NASA

Technical Memorandum 79530

The City and Its Need for Technology

(NASA-TM-79530) THE CITY AND ITS NEED FOR TECHNOLOGY (NASA) 9 p HC A02/MF A01 CSCL 05A

N78-21014

Unclas G3/85 12583

Bernard L. Berkowitz

APRIL 1978

National Aeronautics and Space Administration

Goddard Space Flight Center
Greenbelt, Maryland 20771

TM 79530

THE CITY AND ITS NEED FOR TECHNOLOGY

by

Bernard L. Berkowitz*

April 1978

to be presented at
American Society for Public Administration 39th National Conference
Phoenix, Arizona

GODDARD SPACE FLIGHT CENTER
Greenbelt, Maryland

*Physical Development Coordinator
Mayor's Office, Baltimore City, MD

THE CITY AND ITS NEEDS FOR TECHNOLOGY

by

Bernard L. Berkowtiz
Physical Development Coordinator
Mayor's Office, Baltimore City, Maryland

ABSTRACT

There are a number of ways in which a large modern U. S. city must become involved with technology. An experimental program has been undertaken jointly by the City of Baltimore and the NASA/Goddard Space Flight Center to explore the process of identifying and transferring newer technology for the benefit of the City. This paper describes the nature of the problems involved in the experiment, some of the areas of supposed commonality with other cities and some of the prerequisites for any city to become involved with technological innovation.

PRECEDING PAGE BLANK NOT FILMED

CONTENTS

	Page
Abstract	iii
City Problems and the Response Thereto	1
Municipal Problems, Municipal Activism and User "Pull"	1
Baltimore's Experience with Technology Innovation	2
Need for More Systematic Approach to New Technology	3
Politics and Technology	3
Turf and Innovation	4
Summary	4

THE CITY AND ITS NEED FOR TECHNOLOGY

by

Bernard L. Berkowitz
Mayor's Office, Baltimore City, Maryland

City Problems and the Response Thereto

Baltimore City, like most older central cities in the country, faces a host of complex and interrelated problems. The litany is all too familiar--a high unemployment rate, particularly among blacks and youth; a large dependent population of poor, elderly and young; crime and other social problems; obsolescence; middle class flight to the suburbs (hopefully being slowed and reversed); slow growth in the tax base; a higher tax rate than the surrounding suburbs; budgetary strain on municipal services; etc.

Despite the seriousness of these problems, there is a sense of optimism in Baltimore based on the response of City Government, working in cooperation with the private business sector and the communities of the City. Over the past two decades, our downtown renewal program has transformed the Charles Center and Inner Harbor areas and has created one of the most attractive and exciting urban environments in the country. In the City's neighborhoods, an array of local programs, such as urban homesteading and low-interest City financing for rehabilitation of houses and retail facilities, has been combined with federal resources to bring about extensive rehabilitation and conservation. A system of over a dozen neighborhood multi-service centers has been created through a $4 million bond issue supplemented by federal resources. Major transportation improvements are under way, including the construction of a subway. A vigorous economic development program has been initiated. The crime rate has been declining and school performance measures have been improving. The net result of these and other positive changes is a growing confidence that Baltimore City will "make it."

Municipal Problems, Municipal Activism and User "Pull"

My purpose in enumerating some of the positive developments in Baltimore along with our problems is not boosterism. It is rather essential to the understanding of the origin and setting of the Baltimore Applications Project which we are discussing today. Certainly, the existence of problems that could be solved or mitigated by technology transfer underlay

the initial request for assistance from NASA. However, it is unlikely that the request would have been made, or even thought about, if there hadn't been an atmosphere of activism and entrepreneurship, and the confidence that goes with it, in the City Government.

In seeking NASA's help in achieving useful technology transfer in Baltimore, we in City Government recognized the limitations of technology. By itself, technology can not affect the serious social and economic problems afflicting a large City like Baltimore, but it can result in more economical and efficient provision of services to citizens or in the improved quality of services and it can result in reduced operating costs--e.g., for energy usage in buildings. Thus, it can make a contribution to maintaining the financial viability of the City and, through better services, to improving the quality of life. This was our objective in initiating the Baltimore Applications Project.

The recognition that the nearby NASA/Goddard Space Flight Center might be receptive to providing a technology transfer agent to Baltimore is a reflection of a kind of municipal activism or entrepreneurship which fortunately is characteristics of Baltimore City Government. There is a constant seeking out of new ways to deal with problems and an alertness to innovation elsewhere in the country. It is this activism which transformed the need for technology to deal with problems into the request, or the user pull.

Baltimore's Experience with Technology Innovation

The receptivity of the Baltimore City Administration and key agencies to the Baltimore Applications Project experiment is in part related to the experience with technology in Baltimore.

There are a number of technological firsts which occurred in Baltimore and which are well known to many citizens and officials. Baltimore was the scene of the first gaslight in the U. S. that was used to light a room or a street corner. The first trip in a steam car was made in 1830 by Peter Cooper from Baltimore to Ellicott City, 13 miles away. The first regular steam vessel to cross the Atlantic left Baltimore in 1838. The first submarine was built in 1903. The list is quite long.

More to the point is the interest in technology within City Government. Proximity to the Johns Hopkins School of Public Health and the engineering school of Johns Hopkins has encouraged a high level of professionalism and innovation in the City Health and Public Works Departments. Graduates of the

City's Housing and Community Development Department have included the current Assistant Secretary of Housing and Urban Development for Community Development and his counterpart during the Eisenhower Administration.

The high level of interest in innovation is reflected in a number of recent projects in Baltimore. Under a demonstration grant from the Environmental Protection Agency (EPA) and with even larger City and State funding, the first large scale pyrolysis plant has been built in Baltimore for solid waste disposal. Although this planned 1,000 tons per day facility has not performed as expected, particularly as regards air quality, the City has taken the project over from the Monsanto Corporation and is installing electrostatic precipitators to meet air quality requirements. Other examples include the construction of separate sanitary and storm sewer systems early in this century and the first centralized computer-based system for traffic control in 1957.

The interest and experience in technology within the City bureaucracy was a facilitating factor in the successful interface between the technology agent assigned by NASA and City officials.

Need for More Systematic Approach to New Technology

With all of the interest in technological applications in Baltimore City, the question might well be asked as to why there was need for outside help. The answer quite simply is that the City officials involved in new technology have ongoing operational functions that are their primary responsibilities. Examination of new technological possibilities might emerge from a particular project or program needs, but no City staff have a continuing assignment to look for new technology.

To the City Administration, the City's efforts in technological applications, though impressive, did not appear to be systematic and comprehensive. This is the void that was filled by the Baltimore Applications Project.

Politics and Technology

When the Baltimore Applications Project was started, there was concern that the project might become a political football. It was recognized that a high profile in the media could arouse unrealistic expectations on the part of the public and other local elected officials. If those expectations were disappointed, the result would be embarrassment for the City Administration. In any case, it was felt that the sort of

careful, deliberate investigations required under this project could not be achieved in the atmosphere of a fishbowl. Thus, a deliberate effort was made to maintain a low profile for the project and to insulate it from local politics.

As the City's Physical Development Coordinator, I was designated by the Mayor to be the primary liaison with the Balimore Applications Project. It was my responsibility to protect the project from politcal interference, to avoid political problems and to facilitate the interface between the NASA technology agent and the City Officials.

Turf and Innovation

The location of the technology agent in the Mayor's Office, his relationship to the Physical Development Coordinator and his presence at cabinet meetings, all signaled the chief executive's interest and commitment to the Baltimore Applications Project. This undoubtedly facilitated the interface with the agency officials. However, I believe that the professionalism and diplomacy of the technology agent are even more important reasons for the successful relationships that developed between the agent and the agency officials.

While defensive attitudes aimed at turf protection in the agencies might have been expected, they did not generally occur. The mode of operation of the technology agent was not threatening and the professionalism of the City officials was reflected in a positive rather than defensive attitude. In fact, agency staff have often sought the advice of the technology agent regarding technical problems, some not directly related to technology.

The Baltimore Applications Project has been helpful in mitigating turf problems among the agencies in a few cases. In matters involving two or more agencies, the technology agent has occasionally served to reduce tensions and avoid conflict. For example, a recent investigation of the need to modernize the Fire Department's communication system was fraught with potential conflict among those involved--the Fire Department, Bureau of Purchases, Telecommunications Office, Planning Department, etc. The presence of a respected outside authority in the person of the NASA agent was a prime factor in being able to undertake this analysis in a cooperative atmosphere.

Summary

In summary, it is important to reemphasize the key factors behind the City's honest desire for help in technology transfer--viz., the existence of problems that could be alleviated by technology, what I have characterized as municipal activism or entrepreneurship and the self-confidence of a City Government with experience in innovation.

BIBLIOGRAPHIC DATA SHEET

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
TM 79530		

4. Title and Subtitle	5. Report Date
The City and Its Need for Technology	April 1978
	6. Performing Organization Code

7. Author(s)	8. Performing Organization Report No.
Bernard L. Berkowitz	

9. Performing Organization Name and Address	10. Work Unit No.
Mayor's Office Baltimore City, Maryland 21202	11. Contract or Grant No.
	13. Type of Report and Period Covered
12. Sponsoring Agency Name and Address	Preprint of Presentation April 1978
NASA/Goddard Space Flight Center Greenbelt, Maryland 20771	14. Sponsoring Agency Code

15. Supplementary Notes

Presented at American Society for Public Administration 39th Annual Conference

16. Abstract

There are a number of ways in which a large modern U. S. city must become involved with technology. An experimental program has been undertaken jointly by the City of Baltimore and the NASA/Goddard Space Flight Center to explore the process of identifying and transferring newer technology for the benefit of the City. This paper describes the nature of the problems involved in the experiment, some of the areas of supposed commonality with other cities and some of the prerequisites for any city to become involved with technological innovation.

17. Key Words (Selected by Author(s))	18. Distribution Statement
Technology transfer; local government; City of Baltimore; Baltimore Applications Project	

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price*
U	U	7	

*For sale by the National Technical Information Service, Springfield, Virginia 22151.